

### **REMARKS**

Claims 1-4, 6-17, 19-25 are pending. The claims are amended without prejudice to or disclaimer of Applicants' right to pursue the canceled subject matter of these and any previously canceled or amended claims in a later application. The amendments to claims 1, 11 and 17 find support *inter alia* in the original claims and in the specification at page 2 lines 19-21, 34-41, page 3 lines 12-13, 26-46, page 4 line 20, page 9 lines 31-35, page 10 line 28 through page 11 line 29, and page 21 Table 1. Claims 2, 3, 7-10, 12-16, 19, 22 and 23 have been amended to correct typographical errors and to provide proper antecedent basis; support can be found *inter alia* in the original claims. New claims 24 and 25 find support *inter alia* in the original claims and in the specification at page 1 lines 5-9, page 9 lines 31-35, and page 11 lines 31-34. No new matter has been added.

### **Rejections for Double Patenting**

#### ***Provisional Rejections***

Claims 1-4, 7, 10-16, 19, 20 and 23 stand provisionally rejected under the judicially created doctrine of obviousness-type double-patenting over claims 1, 3-8 and 14-19 of co-pending U.S. Application Serial No. 10/125,272. In order to expedite prosecution, because this is a provisional rejection, Applicants will file an appropriate terminal disclaimer if the rejection stands when the claims are otherwise found allowable.

Claims 1-4, 8-10, 12-16 and 19 stand provisionally rejected under the judicially created doctrine of obviousness-type double-patenting over claims 1-9 and 24-27 of co-pending U.S. Application Serial No. 10/280,324 in view of Itoh et al. (U.S. Patent No. 5,080,917, hereinafter "Itoh").

Claims 1-4, 22 and 23 stand provisionally rejected under the judicially created doctrine of obviousness-type double-patenting over claims 1-3, 5, 8 and 12 of co-pending U.S. Application Serial No. 10/500,144 in view of Itoh.

In light of the claim amendments, Applicants disagree with the applicability of Itoh and traverse the rejections based on Itoh for the reasons explained below in the discussions of the Itoh reference. Also, Itoh is relied upon for teaching the limitations of claims 1-4 “which are related to the production of the granulate.” Office Action, page 4. Applicants respectfully submit that this is not a *prima facie* showing of obviousness because it is not clear what steps in the recited process are “related to the production of the granulate.” Reconsideration and withdrawal of the rejection is requested.

### ***Non-provisional Double-Patenting Rejections***

Claims 1-4, 8-10, 12-16 and 19 stand rejected under the judicially created doctrine of obviousness-type double-patenting over claims 1, 2 and 4 of U.S. Patent No. 6,500,426 (hereinafter “the ‘426 patent”) in view of Itoh. Applicants respectfully disagree and traverse the rejection.

As amended, the method of claim 1 is very similar to the method of co-pending U.S. Application Serial No. 10/125,272, which the Board of Patent Appeals and Interferences found nonobvious and not anticipated (see attached Decision, Appeal No. 2006-0201, hereinafter “the Board Decision”). The ‘426 patent corresponds to International Application Publication No. WO98/54980, which was considered by the Board in its decision. For the same reasons as in the Board Decision, the claims as amended are nonobvious and not anticipated.

Additionally, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. See MPEP § 2143.03. Neither the ‘426 patent or Itoh, alone or in combination, disclose or teach all the claim limitations. Therefore, the ‘426 patent or Itoh, alone or in combination, do not render obvious the subject matter of claims 1-4, 8-10, 12-16 and 19.

The Examiner acknowledges that the ‘426 patent does not disclose polymer-coated granules and relies on Itoh for this teaching. Neither the ‘426 patent nor Itoh, alone or in combination, teach or suggest the method of amended claim 1; a method of preparing an enzyme-containing granulate suitable for use in animal feed, which comprises mixing at least one enzyme, a solid support suitable for feedstuffs, water, and at least one additive in an

effective amount; mechanically processing the mixture to obtain enzyme-containing granules; drying the granules; and coating the granules with an organic polymer which is suitable for feedstuffs, wherein the granules obtained have a pelleting stability greater than uncoated granules.

The Examiner alleges that the ordinary artisan would have been motivated to coat the enzyme-containing granules of the '426 patent with a polymeric substance because such coating serves to protect the enzyme from acidic degradation in the stomach of the animal. However, the present invention is directed to a method for preparing enzyme-containing granulates suitable for use in animal feed coated with an organic polymer, which enzyme-containing granulates have a pelleting stability greater than uncoated granulates. Neither the '426 patent or Itoh, alone or in combination, teach or suggest that an organic-polymer coating would improve the pelleting stability of an enzyme-containing granulate compared to an uncoated granulate. For this reason, reconsideration and withdrawal of the obviousness-type double-patenting rejection is respectfully requested.

Furthermore, if an independent claim is nonobvious then any claim dependent therefrom is nonobvious. See *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988). Independent claims 11 and 17 were not included in the obviousness rejection. Because claims 12-16 and 19 are dependent on either claim 11 or 17 (directly or indirectly), they are thus likewise nonobvious. Moreover, claims 6 and 7 were also not included in the obviousness rejection. Claim 8 is dependent from claim 6, thus comprises all the limitations of claim 6, and as such is also nonobvious as was found for claim 7. Additionally, because claims 2-4 and 8-10 are dependent on claim 1 either directly or indirectly and because claim 1 is nonobvious in light of the amendments (see also the Board Decision) and the above remarks, claims 2-4 and 8-10 are thus likewise nonobvious.

Reconsideration and withdrawal of this rejection is respectfully requested.

**Rejections Under 35 U.S.C. § 112, Second Paragraph**

The Examiner rejects claim 11 for lacking a pelleting step. Applicants respectfully disagree. As amended, claim 11 recites "a method for preparing a pelletized feedstuff composition, which comprises pelletizing a mixture . . ." (emphasis added). Thus, claim 11

recites a pelletizing step. Reconsideration and withdrawal of this rejection is respectfully requested.

The Examiner rejects claim 19 for lacking antecedent basis for “during pelletizing” in claim 11. Applicants respectfully disagree. As just indicated, claim 11 recites “pelletizing.” Reconsideration and withdrawal of this rejection is respectfully requested.

The Examiner also rejects claim 23 for lacking antecedent basis for “additive” in claim 22. In view of the amendments, the rejection is believed to be rendered moot and is respectfully requested to be withdrawn.

### **Rejections under 35 U.S.C. § 102**

#### ***Rejections under 35 U.S.C. § 102(b)***

Claims 1-4, 8-16, 20, 22 and 23 were rejected as being anticipated by Itoh in light of the Webster’s Dictionary. Applicants respectfully disagree and traverse the rejection.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegall Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987). “[T]o hold that a prior art reference anticipates a claim, the Board must expressly find that every limitation in the claim was identically shown in the single reference.” *Gechter v. Davidson*, 116 F.3d 1454, 1460 (Fed. Cir. 1997). See also the Board Decision.

Itoh does not anticipate the subject matter of claims 1-4, 8-16, 20, 22 and 23. The reference does not teach a method of preparing an enzyme-containing granulate suitable for use in animal feed, which comprises mixing at least one enzyme, a solid support suitable for feedstuffs, water, and at least one additive in an effective amount; mechanically processing the mixture to obtain enzyme-containing granules; drying the granules; and coating the granules with an organic polymer which is suitable for feedstuffs, wherein the granules obtained have a pelleting stability greater than uncoated granules as recited in claim 1.

Specifically, Itoh does not teach a method for preparing enzyme-containing granulates by coating granules with an organic polymer coating acceptable as feedstuff in an amount sufficient to improve pelleting stability of the granulate when compared with an uncoated granulate. Itoh does not mention that an organic polymer coating would improve the pelleting stability of an enzyme-containing granulate compared to an uncoated granulate. Furthermore the Examiner acknowledges that Itoh does not teach a pellet comprising a polymer-coated enzyme-containing granule (see Office Action page 12 last sentence). Itoh does not anticipate the claims as amended because every limitation in the claims is not identically shown in the Itoh.

The Examiner further alleges that Itoh meets the limitations of claims 11, 20 and 22-23. Applicants respectfully disagree and traverse the rejection. The rejection of claim 11 was based on the claim lacking a step for pelleting. As explained above claim 11 recites a pelletizing step. The rejection of claim 11 is believed to be rendered moot and is respectfully requested to be withdrawn.

Claim 20 depends from claim 1 and thus comprises all the limitations of claim 1. For the same reasons as above, Itoh does not anticipate claim 20 because Itoh does not mention that an organic polymer coating would improve the pelleting stability of an enzyme-containing granulate compared to an uncoated granulate.

In the rejection of claim 22 and 23, the Examiner made the assumption that the "additive" recited in former claim 23 was the enzyme in the granule. The Examiner's assumption is incorrect. Former claim 22 recited a "method for improving pelleting stability of a granulated enzyme-containing feed additive." Thus the additive recited in former claim 23 referred to the "granulated enzyme-containing feed additive" and not simply the enzyme in the granule. Furthermore, in light of the amendments, the rejection is believed to be rendered moot and is respectfully requested to be withdrawn.

***Rejections under 35 U.S.C. § 102(e)***

Claims 1-4, 6, 7, and 10-16 were rejected as being anticipated by De Lima et al. (U.S. Patent No. 6,136,772, hereinafter "the '772 patent") in light of Markussen (U.S. Patent No.

4,106,991, hereinafter “the ‘991 patent”). Additionally, claims 1-4 and 19-22 were rejected as being anticipated by the ‘426 patent. Applicants respectfully disagree and traverse the rejection.

As mentioned above, as amended, the method of claim 1 is very similar to the method of co-pending U.S. Application Serial No. 10/125,272, which the Board of Patent Appeals and Interferences found nonobvious and not anticipated (see attached Decision, Appeal No. 2006-0201, hereinafter “the Board Decision”). In its decision, the Board reviewed and considered at length the ‘772 patent and the corresponding international application to the ‘426 patent (WO 98/54980), reversing the Examiner’s anticipation and obviousness rejections based on the ‘772 patent and WO 98/54980. For the same reasons as in the Board Decision, the claims as amended are likewise nonobvious and not anticipated.

Reconsideration and withdrawal of this rejection is respectfully requested.

**Rejections under 35 U.S.C. § 103(a)**

**Becker in view of Maruyama**

Claim 9 was rejected under 35 U.S.C. § 103(a) as obvious over Becker et al. (U.S. Publication No. 2002/0034549, hereinafter “Becker”) in view of Maruyama et al. (JP 408333239 A, hereinafter “Maruyama”). Applicants respectfully disagree with the Examiner and traverse the obviousness rejection.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. See MPEP § 2143.03. Neither Becker nor Maruyama, alone or in combination, teach or suggest all the claim limitations. Therefore, Becker or Maruyama, alone or in combination, does not obviate the subject matter of claim 9.

The present invention is directed to a method for preparing enzyme-containing granulates suitable for use in animal feed coated with an organic polymer, which enzyme-containing granulates have a pelleting stability greater than uncoated granulates. Neither Becker nor Maruyama, alone or in combination, teach or suggest that an organic-polymer coating would improve the pelleting stability of an enzyme-containing granulate compared to an uncoated

granulate. Because all the claim limitations are not taught or suggested by the references cited by the Examiner, Becker or Maruyama, alone or in combination, do not render obvious the subject matter of claim 9.

Furthermore, as mentioned above, as amended, the method of claim 1 is very similar to the method of co-pending U.S. Application Serial No. 10/125,272, which the Board of Patent Appeals and Interferences found nonobvious and not anticipated. In its decision, the Board interpreted the preamble of claim 1 "to limit the potential components of the granules to those that are compatible with feeding the resulting granules to an animal." For this additional reason, Becker in view of Maruyama is not relevant.

*U.S. Application Serial No. 10/125,272*

Claims 1-4, 6-17 and 19-23 are provisionally rejected under 35 U.S.C. 103(a) as being obvious over co-pending U.S. Application Serial No. 10/125,272. In order to expedite prosecution, because this is a provisional rejection, Applicants will file an appropriate terminal disclaimer if the rejection stands when the claims are otherwise found allowable. Applicants thank the Examiner for her helpful comments earlier today on the provisional obviousness rejections and understand that a terminal disclaimer will address them.

*U.S. Application Serial No. 10/280,324 in view of Itoh*

Claims 1-4, 6-17 and 19-23 are provisionally rejected as being obvious over co-pending U.S. Application Serial No. 10/280,324 (hereinafter "the '324 application") in view of Itoh. Applicants respectfully disagree and traverse the rejection.

The Examiner acknowledges that the '324 application does not disclose polymer-coated granules and relies on Itoh for this teaching. Neither the '324 application nor Itoh, alone or in combination, teach or suggest the method of amended claim 1: a method of preparing an enzyme-containing granulate suitable for use in animal feed, which comprises mixing at least one enzyme, a solid support suitable for feedstuffs, water, and at least one additive in an effective amount; mechanically processing the mixture to obtain enzyme-containing granules; drying the granules; and coating the granules with an organic polymer which is suitable for

feedstuffs, wherein the granules obtained have a pelleting stability greater than uncoated granules.

The Examiner alleges that the ordinary artisan would have been motivated to coat the enzyme-containing granules of the '324 application with a polymeric substance because such coating serves to protect the enzyme from acidic degradation in the stomach of the animal. However, the present invention is directed to a method for preparing enzyme-containing granulates suitable for use in animal feed coated with an organic polymer in which the enzyme-containing granulates have a pelleting stability greater than uncoated granulates. Neither the '324 application or Itoh, alone or in combination, teach or suggest that an organic-polymer coating would improve the pelleting stability of an enzyme-containing granulate compared to an uncoated granulate. Furthermore the Examiner acknowledges that Itoh does not teach a pellet comprising a polymer-coated enzyme-containing granule (see Office Action page 12 last sentence). Because all the claim limitations are not taught or suggested by the references cited by the Examiner, the '324 application or Itoh, alone or in combination, do not render obvious the subject matter of claims 1-4, 6-17 and 19-23.

*U.S. Application Serial No. 10/500,144 in view of Itoh*

Claims 1-4, 22 and 23 are provisionally rejected as being obvious over co-pending U.S. Application Serial No. 10/500,144 (hereinafter "the '144 application") in view of Itoh. Applicants respectfully traverse.

Because the '144 application has a filing date and publication date after the filing date of the present application, the '144 application is not prior art under 35 U.S.C. 102(a), (b), or (e). 35 U.S.C. 102 provides in part

A person shall be entitled to a patent unless -

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or



(e) the invention was described in - (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The '144 application was filed on March 18, 2005 as a national stage application under 35 U.S.C. 371 of international application PCT/EP03/00342 filed on January 14, 2003 which published on July 24, 2003 as WO 03/05087. The '144 application also published in the U.S. on July 28, 2005 as U.S. Publication No. 2005/0163765. In contrast, the present application was filed on December 19, 2001 as a national stage application under 35 U.S.C. 371 of international application PCT/EP00/05793 filed on June 23, 2000. Because the earliest publication date of the '144 application was after the filing date of the present application, the '144 application therefore is not prior art under either 35 U.S.C. 102(a) or 102(b).

Furthermore the publication of the '144 application is also not prior art under 35 U.S.C. 102 (e). The earliest US application publication of the '144 application was the PCT publication. Because the PCT application leading to the '144 application was filed after November 29, 2000, was published in English and designated the U.S., the 102(e) date is its international filing date of January 14, 2003. Because the 102(e) date is after the filing date of the present application, the PCT publication of the '144 application therefore is not prior art under 35 U.S.C. 102(e).

Because the '144 application is inapplicable as prior art, this rejection is believed to be rendered moot. Reconsideration and withdrawal of this rejection is respectfully requested.

*Itoh in further view of Johnson and Jacobsen*

Claims 1-4, 8-17, 20, 22 and 23 are rejected as being obvious over Itoh in further view of Johnson et al. (U.S. Patent No. 4,976,977, hereinafter "Johnson") and Jacobsen (U.S. Patent No. 5,391,371, hereinafter "Jacobson"). Applicants respectfully disagree and traverse the rejection.

The Examiner acknowledges that Itoh does not teach a pellet comprising a polymer-

coated enzyme-containing granule (see Office Action page 12 last sentence). The Examiner characterizes Johnson as teaching the desirability to pellet particulate matter intended as animal feed. Johnson discloses a clay particle as a pelleting agent. Johnson does not teach or suggest a pellet comprising a polymer-coated enzyme-containing granule. The Examiner characterizes Jacobsen as disclosing coating an enzyme containing T-granulate coated with a coating agent of wax or fat which improves the stability of the enzyme in the pelleting process. Jacobson corresponds to International Published Application No. WO 92/12645 cited in the specification at page 1 line 39 through page 2 line 5. As explained in the specification, the coating applied to the T granulate as described in Jacobsen requires a high content of an inorganic filler (see Jacobsen column 3 lines 12-22). Furthermore, Jacobsen requires a very specialized support material and complex multistage coating of the specialized support. Thus the method disclosed in Jacobsen is totally different than the method of the claims as amended.

Neither Itoh, Johnson nor Jacobsen alone or in combination teach or suggest the method of amended claim 1: a method of preparing an enzyme-containing granulate suitable for use in animal feed, which comprises mixing at least one enzyme, a solid support suitable for feedstuffs, water, and at least one additive in an effective amount; mechanically processing the mixture to obtain enzyme-containing granules; drying the granules; and coating the granules with an organic polymer which is suitable for feedstuffs, wherein the granules obtained have a pelleting stability greater than uncoated granules. Because all the claim limitations are not taught or suggested by the references cited by the Examiner, reconsideration and withdrawal of the obviousness rejection over Itoh, Johnson, or Jacobsen is respectfully requested.

### CONCLUSION

In view of the above amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejections.


Accompanying this response is a petition for a five month extension of time to and including October 23, 2006, pursuant to 37 CFR § 1.7, and a Request for Continued Examination with the required fee authorization. If any additional fee is due, please charge our Deposit

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First Preliminary Amendment

Docket No.: 13111-00039-US

Account No. 03-2775, under Order No. 13111-00039-US from which the undersigned is  
authorized to draw.

Respectfully submitted,

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